

**DEPARTMENT OF TRANSPORTATION**  
**National Highway Traffic Safety Administration**  
**Petition for Exemption from the**  
**Federal Motor Vehicle Theft Prevention Standard;**  
**JAGUAR LAND ROVER NORTH AMERICA LLC**

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT)

**ACTION:** Grant of petition for exemption.

**SUMMARY:** This document grants in full the Jaguar Land Rover North America LLC's, (Jaguar Land Rover) petition for an exemption of the Jaguar XE vehicle line in accordance with 49 CFR Part 543, Exemption from Vehicle Theft Prevention Standard. This petition is granted because the agency has determined that the antitheft device to be placed on the line as standard equipment is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of 49 CFR Part 541, Federal Motor Vehicle Theft Prevention Standard (Theft Prevention Standard).

**DATES:** The exemption granted by this notice is effective beginning with the 2017 model year (MY).

**FOR FURTHER INFORMATION CONTACT:** Ms. Carlita Ballard, Office of International Policy, Fuel Economy and Consumer Programs, NHTSA, W43-439, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590. Ms. Ballard's phone number is (202) 366-5222. Her fax number is (202) 493-2990.

**SUPPLEMENTAL INFORMATION:** In a petition dated October 9, 2015, Jaguar Land Rover

requested an exemption from the parts-marking requirements of the Theft Prevention Standard for the Jaguar XE vehicle line beginning with MY 2017. The petition requested an exemption from parts-marking pursuant to 49 CFR Part 543, Exemption from Vehicle Theft Prevention Standard, based on the installation of an antitheft device as standard equipment for the entire vehicle line.

Under 49 CFR Part 543.5(a), a manufacturer may petition NHTSA to grant an exemption for one vehicle line per model year. In its petition, Jaguar Land Rover provided a detailed description and diagram of the identity, design, and location of the components of the antitheft device for the Jaguar XE vehicle line. Jaguar Land Rover stated that the MY 2017 Jaguar XE vehicle line will be equipped with a passive, transponder based, electronic engine immobilizer antitheft device as standard equipment. Key components of its antitheft device will include a power train control module (PCM), instrument cluster, body control module (BCM), remote frequency receiver (RFR), remote frequency actuator (RFA), immobilizer antenna unit (IAU), Smart Key, and door control units (DCU). Jaguar Land Rover stated that its antitheft device will also be installed with an audible and visual perimeter alarm system as standard equipment. If unauthorized entry is attempted by opening the vehicle's hood, trunk or doors, the alarm will sound and the vehicle's exterior lights will flash. Jaguar Land Rover also stated that the perimeter alarm system can be armed either with the Smart Key or programmed to be passively armed.

Jaguar Land Rover's submission is considered a complete petition as required by 49 CFR 543.7, in that it meets the general requirements contained in §543.5 and the specific content

requirements of §543.6.

The immobilizer device is automatically activated when the Smart Key is removed from the vehicle. Deactivation occurs once the driver approaches the vehicle by pulling on the driver's door handle or using the Smart Key unlock button to unlock the doors. Jaguar Land Rover stated that the Smart Key is programmed and synchronized to the vehicle through the means of a unique identification key code and a randomly generated secret code that is unique to each vehicle.

In addressing the specific content requirements of §543.6, Jaguar Land Rover provided information on the reliability and durability of its proposed device. To ensure reliability and durability of the device, Jaguar Land Rover conducted tests based on its own specified standards. Jaguar Land Rover provided a detailed list of the tests conducted (i.e., temperature and humidity cycling, high and low temperature cycling, mechanical shock, random vibration, thermal stress/shock tests, material resistance tests, dry heat, dust and fluid ingress tests). Jaguar Land Rover stated that it believes that its device is reliable and durable because it has complied with specified requirements for each test. Jaguar Land Rover stated that reliability and durability of its device is further supported by equipping its vehicles with a key recognition sequence that has over a billion code combinations with encrypted data that are secure against duplication. Jaguar Land Rover stated that the coded data transfer between the modules that will be installed on its XE vehicles use a unique, secure identifier, a random number and a secure public algorithm. Jaguar Land Rover further stated that since the Jaguar XE vehicle line will utilize a push button vehicle ignition, it does not have a conventional mechanical key barrel which would allow for forcible bypass of the key-locking system.

Jaguar Land Rover stated that there will be three methods of system operation for its XE vehicle line. Specifically, operation of the engine is accomplished when either the Smart Key is automatically detected by the vehicle, the vehicle is unlocked using the Smart Key unlock button or by using the emergency key blade. Jaguar Land Rover stated that automatic detection of the Smart key method occurs when authentication of the correct Smart Key via a low frequency to remote frequency challenge response sequence occurs after the driver/operator approaches the vehicle, pulls the driver's door handle, and unlocks the doors. When the driver presses the ignition start button, a search begins to find and authenticate the Smart Key within the vehicle interior. Jaguar Land Rover stated that if this is successful, the information is passed through a coded data transfer to the BCM via the RFA. Then, the BCM will pass the valid key status to the instrument cluster, send the "key valid" message to the PCM, initiate a coded data transfer and authorize the engine to start. Method two of unlocking the vehicle with the Smart Key unlock button occurs when the driver approaches the vehicle; presses the Smart Key unlock button and unlocks the doors. Jaguar Land Rover stated that once the driver presses the ignition start button, the operation process is the same as method one. Jaguar Land Rover stated that if the Smart Key has a discharged or damaged battery, the driver/operator can use method three of removing an emergency key blade from the Smart Key to unlock the doors. After using this method, once the driver presses the ignition start button, a search begins to find and authenticate the Smart Key within the vehicle interior. If this is unsuccessful, the Smart Key needs to be docked under the foot well lamp on the driver's side knee bolster. Once the Smart Key is placed in the correct position and the ignition start button is pressed again, the BCM and Smart Key enter a coded data

exchange via the immobilizer antenna unit. The BCM passes the valid key status to the instrument cluster, via a code data transfer, and then the BCM sends the “key valid” message to the PCM initiating a coded data transfer. If successful, the engine will start the vehicle.

Jaguar Land Rover stated that the Jaguar XE is a new vehicle line and therefore theft rate data is not available. Jaguar Land Rover further stated that its immobilizer antitheft device is substantially similar to the antitheft device installed on the Jaguar XF-Type, Land Rover Discovery Sport, Jaguar F-Type, Jaguar XJ, and the Land Rover Range Rover Evoque vehicle lines which have all been granted parts-marking exemptions by the agency. Jaguar Land Rover stated that based on MY 2012 theft information published by NHTSA, the Jaguar Land Rover vehicles equipped with immobilizers had a combined theft rate of 0.81 per thousand vehicles, which is below NHTSA’s overall theft rate of 1.13 thefts per thousand vehicles. Using an average of 3 MYs data (2011 – 2013), NHTSA’s theft rates for the Jaguar XF-Type, Jaguar XJ and the Land Rover Range Rover Evoque are 0.7237, 1.1466 and 0.4495 respectfully. Theft data for the Jaguar F-Type and the Land Rover Discovery Sport is not available. Jaguar Land Rover believes these low theft rates demonstrate the effectiveness of the immobilizer device. Additionally, Jaguar Land Rover notes a Highway Loss Data Institute news release (July 19, 2000) showing approximately a 50% reduction in theft for vehicles installed with an immobilizer device. The agency agrees that the device is substantially similar to devices installed on other vehicle lines for which the agency has already granted exemptions

Based on the supporting evidence submitted by Jaguar Land Rover on its device, the agency believes that the antitheft device for the Jaguar XE vehicle line is likely to be as effective in reducing

and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR 541). The agency concludes that the device will provide the five types of performance listed in §543.6(a)(3): promoting activation; attract attention to the efforts of an unauthorized person to enter or move a vehicle by means other than a key; preventing defeat or circumvention of the device by unauthorized persons; preventing operation of the vehicle by unauthorized entrants; and ensuring the reliability and durability of the device.

Pursuant to 49 U.S.C. 33106 and 49 CFR 543.7 (b), the agency grants a petition for exemption from the parts-marking requirements of Part 541 either in whole or in part, if it determines that, based upon substantial evidence, the standard equipment antitheft device is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of Part 541. The agency finds that Jaguar Land Rover has provided adequate reasons for its belief that the antitheft device for the Jaguar XE vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR Part 541). This conclusion is based on the information Jaguar Land Rover provided about its device.

For the foregoing reasons, the agency hereby grants in full Jaguar Land Rover's petition for exemption for the Jaguar XE vehicle line from the parts-marking requirements of 49 CFR Part 541. The agency notes that 49 CFR Part 541, Appendix A-1, identifies those lines that are exempted from the Theft Prevention Standard for a given model year. 49 CFR Part 543.7(f) contains publication requirements incident to the disposition of all Part 543 petitions. Advanced listing, including the release of future product nameplates, the beginning model year for which

the petition is granted and a general description of the antitheft device is necessary in order to notify law enforcement agencies of new vehicle lines exempted from the parts-marking requirements of the Theft Prevention Standard. If Jaguar Land Rover decides not to use the exemption for this line, it must formally notify the agency. If such a decision is made, the line must be fully marked according to the requirements under 49 CFR Parts 541.5 and 541.6 (marking of major component parts and replacement parts).

NHTSA notes that if Jaguar Land Rover wishes in the future to modify the device on which this exemption is based, the company may have to submit a petition to modify the exemption. Part 543.7(d) states that a Part 543 exemption applies only to vehicles that belong to a line exempted under this part and equipped with the antitheft device on which the line's exemption is based. Further, Part 543.9(c)(2) provides for the submission of petitions "to modify an exemption to permit the use of an antitheft device similar to but differing from the one specified in that exemption."

The agency wishes to minimize the administrative burden that Part 543.9(c)(2) could place on exempted vehicle manufacturers and itself. The agency did not intend in drafting Part 543 to require the submission of a modification petition for every change to the components or design of an antitheft device. The significance of many such changes could be *de minimis*. Therefore, NHTSA suggests that if the manufacturer contemplates making any changes, the effects of which might be characterized as *de minimis*, it should consult the agency before preparing and submitting a petition to modify.

Issued in Washington, DC

Under authority delegated in 49 CFR 1.95

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Raymond R. Posten

Associate Administrator for Rulemaking

**BILLING CODE: 4910-59-P**

[Signature page for Grant of Petition for Exemption, MY 2017 Jaguar XE]

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